

CLAIM AMENDMENTS

1. (Currently Amended) A An elastomeric static gasket adapted to seal between a first sealing surface and an opposed second sealing surface that are secured together such that a clamp load is applied to the static gasket by the first and second sealing surfaces, the static gasket comprising:

a relatively thin carrier member having a top surface facing the first sealing surface and an opposite surface facing the second sealing surface;

a first stopper member located on said top surface;

a second stopper member on said top surface in spaced relationship to said first stopper member; said first and second stopper members forming a cavity therebetween, and with each having a height above said top surface; and

an elastomeric seal member located in said cavity, said elastomeric seal member having at least one sealing bead, said sealing bead having an apex which extends from said top surface and is greater than said height of said first and second stopper members; members, and whereby when said apex is adapted to compress compressed to said height of said first and second stopper members, said seal member moves into the space of said cavity, with said first stopper member forming a first stop and said second stopper member forming a second compression limiter, said first and second limits preventing said seal member from being over compressed while the gasket is subjected to the clamp load from the first sealing surface and the second sealing surface.

2. (Original) A gasket as claimed in Claim 1 wherein said at least one sealing bead has a shape selected from a group consisting of rectangular, square, triangular, void-volume, polygonal, semi-oval, semi-elliptical, semi-round, and truncated triangular.

3. (Currently amended) A gasket as claimed in Claim 1 wherein the volume of said cavity is greater than the volume of the elastomeric seal member.

4. (Currently amended) A gasket as claimed in Claim 1 wherein said elastomer elastomeric seal member is formed of a polymer material selected from the group consisting of fluorocarbon, silicone, fluorosilicone, butyl, EPDM ethylene propylene diene monomer, ethylene-acrylate, polyacrylate, isoprene, perfluoropolymer, natural rubber, epichlorohydrin, nitrile, hydrogenated nitrile and TPE thermoplastic elastomer.

5. (Original) A gasket as claimed in Claim 1 wherein said carrier member has a thickness of less than 1.0mm.

6. (Original) A gasket as claimed in Claim 1 wherein said carrier member has a thickness of 0.01 mm to 0.75mm.

7. (Currently amended) A gasket as claimed in Claim 1 wherein the height of said first stop and second limiters stopper member and the height of said second stopper member are at different heights above the top surface of said carrier.

8. (Currently amended) A gasket as claimed in Claim 1 wherein said first stop stopper member and said second stopper member limiters are made of a material selected from the group consisting of a polymer, metal, ceramic and composite fiber board.

9. (Original) A gasket as claimed in Claim 1 wherein said apex is compressed between 1.5% to 70%.

10. (Currently amended) ~~A~~ An elastomeric static gasket adapted for sealing between two opposed mating surfaces, said static gasket comprising:

~~a carrier member having a top surface and an opposite surface, said carrier member having a thickness of less than 1.0mm;~~

a first pair of stopper members on said top surface, one of said first pair of stopper members in spaced relation to the other of said first pair of stopper members, the one and the other of said first pair of stopper members having a first height above said top surface;

a second pair of stopper members on said opposite surface, one of said second pair of stopper members in spaced relation to the other of ~~said first~~ second pair of stopper members, the one and the other of said second pair of stopper members having a second height above said opposite surface;

a first elastomeric sealing members member on said top surface and interposed ~~said~~ first pair of stopper members, said sealing member having at least one bead; and

a second elastomeric sealing member on said opposite surface and interposed said second pair of stopper members, said second elastomeric sealing member having at least one sealing bead;

whereby when said first and second elastomeric sealing members are adapted to be clamped between the two opposite opposed mating surfaces under a clamp load such that, said at least one bead of said first elastomeric member being is compressed to said first height and said at least one bead of said second elastomeric member being is compressed to said second height, so that said first pair of stopper members height and said second pair of stopper members height limit the compression on said first and second elastomeric sealing members, respectively.

11. (Currently amended) An elastomeric static gasket as claimed in Claim 10 wherein at least one of said first and second said elastomeric sealing member having members has a cure system selected from a group consisting of addition ion cure, condensation cure, free radical cure, catalytic cure, infra-red radiation cure and ultraviolet cure.

12. (Cancelled)

13. (Currently amended) A static gasket as claimed in Claim 12 10 wherein said carrier member ~~having~~ has a thickness between 0.01 mm to ~~0.75mm~~ 1.0 mm.

14. (Currently amended) A static gasket as claimed in Claim 12 10 wherein said carrier member is selected from a group consisting of a polymeric layer, a layer of woven fabric, a layer of non-woven fabric, a layer of metal, a gas diffusion layer, a graphite plate, a proton exchange membrane, a composite fiber board, rubber coated metal layer, and a ceramic layer.

15. (Currently amended) A static gasket as claimed in Claim 12 10 wherein ~~one~~ ~~of a~~ said first pair of said stopper members has a shape factor between 0.15 to 10.

16. (Cancelled)

17. (Currently amended) A static gasket adapted to seal between a first sealing surface and an opposed second sealing surface that are secured together such that a clamp load is applied to the static gasket by the first and second sealing surfaces, the static gasket comprising:

a relatively thin carrier member with a first surface adapted to face said first sealing surface and having a thickness that is less than 1.75mm a second surface adapted to face said second sealing surface;

a first stopper member adjacent located on said first surface and having a first height above the first surface carrier member; and

an elastomeric seal member formed on said first surface of said carrier member, member adjacent to said first stopper member and having a second height above said first surface that is greater than said first height, said first stopper member adapted to prevent preventing said seal member from being over compressed when while the gasket is subjected to a the clamp load from the first sealing surface and the second sealing surface.

18. (Currently amended) The static gasket as claimed in Claim 17 wherein said first stopper member having includes a pair of spaced compression limiters adjacent to said elastomeric polymer member, one of said pair of compression limiters on one side of said elastomeric polymer member and the other of said pair of compression limiters on the other side of said elastomeric polymer member forming a cavity therebetween, with the elastomeric seal located in the cavity.

19. (Currently amended) The static gasket as claimed in Claim 17 wherein said first stopper member being is molded on said carrier member.

20.(Currently amended) The static gasket as claimed in Claim 17 wherein said carrier member having a one surface and an opposite surface, said elastomeric seal member being formed on said one surface, and further comprising:
an adhesive layer on said opposite second surface of said carrier member.

21. (Currently amended) The static gasket as claimed in Claim 18 17 wherein said ~~compression limiters are~~ first stopper member is formed of a material selected from a group including a polymer, metal, ceramic and composite fiber board.

22. (Currently amended) The static gasket as claimed in Claim 17 further comprising:

a second stopper member located on said second surface and having a first height above the second surface; and

a second elastomeric seal member formed on said second surface adjacent to said second stopper member and having a second height above said second surface that is greater than said first height above the second surface, said second stopper member adapted to prevent said second seal member from being overcompressed while the gasket is subjected to the clamp load from the first sealing surface and the second sealing surface wherein said stopper member having at least one compression limiter adjacent said elastomeric seal member to limit the compression of said elastomeric seal member.

23. (Currently amended) The static gasket as claimed in Claim 17 wherein said thickness of said carrier member is between 0.01 mm to 0.75mm.

24. (Currently amended) The static gasket as claimed in Claim 17 wherein said first stopper member being is formed of an elastomeric material, said elastomeric material having a shape factor between 0.15 to 10.

25. (Currently amended) The static gasket as claimed in Claim 22 wherein said second stopper member includes a pair of spaced compression limiters forming a second cavity therebetween, with the second elastomeric seal located in the second cavity 17 further comprising:
~~a second elastomeric seal member formed on said carrier member.~~

26 - 39. (Cancelled)

40. (New) The static gasket as claimed in claim 17 wherein the carrier member has a thickness, and the elastomeric seal member has a thickness that is greater than the thickness of the carrier member.